DOCUMENT RESUME

ED 324 398 CE 054 183

AUTHOR Whiting, Susan; And Others
TITLE Adult Development. What do Teachers of Adults Need To Know?
INSTITUTION Florida Atlantic Univ., Boca Raton. Adult Education Div.
PUB DATE 88
NOTE 42p.
PUB TYPE Information Analyses (070)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Adult Development; Adult Education; Adult Educators; *Andragogy; *Developmental Stages; Educational Psychology; *Educational Theories; Moral Development; Self Actualization; Self Concept
IDENTIFIERS Erikson (Erik); Kohlberg (Lawrence); Levinson (Daniel J); Loevinger (Jane); Maslow (Abraham); Nelson (Florence); Piaget (Jean); Rogers (Carl)

ABSTRACT

The first part of this two-part paper provides a general review of adult development and is premised on an understanding of andragogy. Andragogy is the art and science of helping adults learn. It is based on the following four assumptions about adults: (1) as people mature they become less dependent and more self-directed; (2) experiences serve as resources for learning and help establish identity; (3) the readiness of adults to learn is closely related to the developmental tasks of their social roles; and (4) adults are more problem centered than subject centered in learning. When working with adults, teachers should do the following: (1) define the course goals and objectives clearly; (2) include an appropriate amount of material, avoiding too much or too little; (3) schedule the class lessons to include time for questions, participation, and enjoyment; (4) limit the number of facts, figures, or points presented at one time; (5) provide an adequate amount of time for discussions; (6) design the scope of the course with the learners in mind; (7) limit the student preparation time required prior to class; (8) smile, nod, and use positive reinforcement to encourage students; and (9) use open-ended remarks and comments to stimulate more discussion. The second section of this paper consists of discussions of the following specific theories of adult development: Maslow's hierarchy of needs; Rogers' fully functioning person; Kohlberg's stages of moral development; Nelson's steps in becoming self-directed; Erikson's stages of psychosocial development; Levinson's life structure; Loevinger's stages of ego development; and Piaget's developmental stages. A 15-item reference list is included. (CML)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ADULT DEVELOPMENT

What Do Teachers of Adults Need to Know?

ED324398

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

L Guglielmino

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Susan Whiting

Lucy M. Guglielmino

Arthur W. Burrichter

Adult Education Office
Florida Atlantic University
Boca Raton, Florida

1988

ED054183

TABLE OF CONTENTS

Section I 1

Section II

- Maslow's Hierarchy of Needs 9
- Rogers' Fully Functioning Person 13
- Kohlberg's Stages of Moral Development 15
- Nelson's Steps in Becoming Self-directed 19
- Erikson's Stages of Psychosocial Development 22
- Levinson's Life Structure 25
- Loevinger's Stages of Ego Development 29
- Piaget's Developmental Stages 33

References 36

SECTION I

A Review of Adult Development

The job of the educator is to facilitate the development of the adult learners in accordance with the students' needs and goals. Given adequate time and attention, most adults are capable of learning what they wish to know (Draves, 1984).

Development, according to Webster, is "a step or stage in growth, advancement, etc." The development of adults is an area which has been ignored for many years. Only since the middle of the 1900's has adult development received much attention or been the subject of much research.

The recent interest in adult development is due to the increase in anticipated life span and the flexibility required by adults to live in today's rapidly changing society. Developmental growth may be noticeable in physical change, as well as in areas that may change behavior.

Educators have sometimes been criticized for the ways they deal with adults. Eunice Shaed Newton said, "In spite of the fact that educators have recognized for several decades that a child is not simply a small adult, it has apparently been with difficulty that they understand that an adult is not merely a large child"

(Newton, 1980).

There are a variety of theories about adult development. Some are hierarchal and some are directly age related. There are theories outlining specific phases and stages. Some theories focus on internal change, while others concentrate on external events. Personality and health also may affect an individual's development. A discussion of specific theorists can be found in Section II of this paper.

Innovatively integrating knowledge of adult development into adult education programs is a challenge for educators. They must find ways to assist adults with their learning. This can be done by designing activities which match and/or challenge the developmental level of the learner.

An understanding of andragogy is helpful. Andragogy is the art and science of helping adults learn. It is based on four assumptions about adults:

1. As people mature they become less dependent and more self-directed.

2. Experiences serve as resources for learning and help establish self-identity.

3. The readiness of an adult to learn is closely related to the developmental tasks of his/her social

role.

4. Adults are more problem-centered than subject-centered in learning.

Adults who manage their own lives also can take responsibility for their own learning. Contract learning is one technique that can be used successfully with individuals at various developmental levels to enhance self-directedness. Learning contracts include objectives, a schedule and location for learning, content, activities, resources, and a plan for evaluation. Enhancing an individual's ability to become more self-directed builds self-esteem and promotes development.

As an individual becomes more independent, the role of the teacher changes. Nelson outlines four steps in becoming self-directed. They are fundamentals, pleasing the teacher, pleasing the teacher and self, and pleasing self. Chickering suggests teachers take the roles of model, resource and colleague (Merriam, 1984).

Students can serve as resources for each other and share their experiences and expertise. Techniques that make use of learners' experiences include group discussions, simulation exercises, laboratory

experiences, field experiences, and problem-solving projects. The educator must be aware that experiences may bring along preconceptions, prejudices, defensiveness, and habitual ways of thinking and acting. Adult educators have to work at utilizing strategies for helping people become more open-minded.

Experiences are a means of defining a person's identity. Ignoring an individual's experience may be perceived as rejection of the person rather than just the experience. "This is especially important in working with undereducated adults, who, after all, have little to sustain their dignity other than their experience" (Knowles, 1984).

Transition and change are factors related to participation in adult education. Eighty-three percent of the participants in a study by Aslanian and Brickell (1980) cited past, present, or future life transitions as the reason for taking part in educational programs. Most adults want instruction that is problem-centered, and they desire to learn a particular skill for a specific reason. Discovering the learner's goal will enable the teacher to assist in its achievement. An adult becomes interested in learning something when the need to know arises or when learning enables some

aspect of life to be performed more effectively.

Readiness and development are closely related. Students at lower levels of developmental stages may require activities with more structure and direct experiences. Minimizing diversity and providing a personal atmosphere in the classroom are helpful also (Weathersby and Tarule, 1980 cited in Merriam, 1984).

As facilitators, teachers manage and design the processes by which adults may gain mastery of the necessary skills. When working with adults:

*Define the course goals and objectives clearly.

*Include an appropriate amount of material (avoid too much or too little).

*Schedule the class lessons to include time for questions, participation and enjoyment.

*Limit the number of facts, figures or points presented at one time.

*Provide an adequate amount of time for discussions.

*Design the scope of the course with the learners in mind.

*Limit the student preparation time required prior to class.

*Smile, nod, and use positive reinforcement to

encourage students.

*Use open-ended remarks and comments to stimulate more discussion.

Studies have shown that adults are quite capable of learning, regardless of their age. Thorndike (1928) studied the rate of learning and found that it peaked between the ages of 20 and 25. Between the ages of 24 and 42, the rate of learning decreased at about one percent per year. Lorge (1936) investigated the power to learn and measured both speed and quality of performance. When only quality was considered, performance did not decline with age. In order to accomodate the slower speeds, provision of adequate time for adult students to complete tasks and analyze problems is necessary.

Certain types of intelligence are more affected by age than others. Cattell and Horn describe two types of intelligence: fluid and crystallized.

Fluid intelligence involves formation of concepts, short-term memory, abstract reasoning and perception of complex relationships. It is not experientially based. Most tests of fluid intelligence involve common word analogies, matrices, and rote memory. This type of intelligence tends to peak during adolescence and

gradually declines during adulthood. This may be due to decreases in the number of neurons in certain areas of the brain during adulthood.

Crystallized intelligence involves applying knowledge in society. It is often tested through vocabulary, social situations and arithmetic reasoning. Crystallized intelligence continues to increase gradually with age. Implementation of activities which require the use of crystallized intelligence rather than fluid intelligence will enable more adult students to be successful.

Many lay people believe that age and forgetfulness go hand in hand. Memory is broken into three stages: recording, retaining, and recalling and recognizing. Recall is the area where most age-related memory decline is noticed. Adults find it easier to recall information when the recall conditions are similar to the conditions when the information was first recorded. In addition, most adult errors are of omission rather than commission. (Reese & Botwinick, cited in Long, 1983). Adults do better on memory tasks when they are able to set their own pace.

Recognition of the developmental level of each learner is as crucial as correct diagnosis of

instructional level. Educators must acknowledge that the needs, interests, and abilities of their students are all different. Teachers who possess an understanding of adult development are more able to facilitate learning and design activities most beneficial to students.

SECTION II

MASLOW'S HIERARCHY OF NEEDS

SELF-ACTUALIZATION

SELF-ESTEEM

LOVE AND BELONGINGNESS

SAFETY AND SECURITY NEEDS

PHYSIOLOGICAL NEEDS

MASLOW'S HIERARCHY OF NEEDS

Like other humanists, Abraham Maslow believes that a person's perceptions are a result of his/her experiences. He also believes that an individual is responsible for becoming what he or she wants to become.

In Maslow's hierarchy, the goal is to move to the highest levels of the pyramid. In order to do so, all of the lower needs must be fulfilled.

The lowest level is the physiological needs. When teaching adults, the facilities and plans should be checked to ensure that they will afford comfort. For example:

*A room that is too warm or without sufficient furniture of appropriate size can present a problem.

*Breaks should be planned to allow time for movement. Time spent on breaks need not be considered a waste of time. Students may discuss topics from class or exchange information at this time.

*Irrelevant objects and information can be very distracting to adults. It is necessary to

organize material well, minimize superfluous information, and provide clear explanations and instructions.

*Use of bigger print, good lighting, and clear audio-visual materials becomes increasingly important as the age of the learners increases.

The next level is safety and security needs. Events can have an effect on a person's feeling of security. For instance, a learner who just lost his/her job may be much more concerned with paying bills than with classwork. Learners lacking in confidence can benefit from teachers who smile and use positive reinforcement as often as possible. When correcting a learner, it is best to describe exactly what the learner is doing wrong and then precisely describe what needs to be done. When you focus the correction on the task rather than the individual and reinforce the individual's self-esteem with a smile and a friendly voice tone, the error is more likely to be viewed as a natural part of the path to progress rather than as a failure.

The third level is love and belongingness. Encouraging participation and making all participants feel welcome as members of the class are critical to

success. Activities designed to allow participants to become acquainted and to share some of their outside interests help to meet this need.

The fourth level is self-esteem. Planning activities which afford participants a measure of success is important. Activities which are too difficult invite frustration rather than challenge. Activities may be best designed when students can proceed from activity to activity on their own time schedule.

The highest level is self-actualization. These individuals accept themselves, are realistically oriented, are problem-centered rather than self-centered, judge others as individuals, are independent, and are creative. Although self-actualization is based on an individual's entire life, learning situations which promote self-direction in learning, creativity, and non-stereotypical thinking are conducive to movement toward self-actualization.

ROGERS' FULLY FUNCTIONING PERSON

LEARNING EXPERIENCES MUST INCLUDE:

PERSONAL INVOLVEMENT

SELF-INITIATION

PERVASIVENESS

SELF-EVALUATION

MEANING

ROGERS' FULLY FUNCTIONING PERSON

Carl Rogers, also a humanist, describes the "fully functioning person", a description which is similar to that of Maslow's self-actualized person.

The role of the teacher, according to Rogers, is one of facilitator. His first basic hypothesis was: We cannot teach another person directly; we can only facilitate his learning. To Rogers, therapy and education are similar processes.

In order to develop fully functioning individuals, learning experiences must be designed to include:

*Personal involvement--Both the feeling and thinking parts of the person should be involved in the learning event.

*Self-initiation--The individual should have the opportunity for a feeling of discovery.

*Pervasiveness--The activity must have an impact on the individual's behavior, personality or attitudes.

*Self-evaluation--The learner must determine if the activity is meeting some need he/she has.

*Meaning--The meaning of the activity becomes incorporated into the total experiences of the individual.

KOHLBERG'S STAGES OF MORAL DEVELOPMENT

PRECONVENTIONAL LEVEL
- **STAGE 1**
- **STAGE 2**

CONVENTIONAL LEVEL
- **STAGE 3**
- **STAGE 4**

PRINCIPLED OR POSTCONVENTIONAL LEVEL
- **STAGE 5**
- **STAGE 6**

KOHLBERG'S SIX STAGES OF MORAL DEVELOPMENT

According to Kohlberg, individuals progress through the stages of moral development sequentially as they gain more sophistication in moral reasoning. Kohlberg divided development into three levels of two stages each.

The lowest developmental level is the preconventional level. In stage one, the person follows rules to avoid punishment. Students functioning in this stage perceive the teacher as the one who makes the rules and punishes those who do not follow them. The individual does not relate two points of view.

In stage two, the person gives to and helps others in order to receive something in return. Following rules is done to meet his/her needs. He/she recognizes that all people have the right to follow their own interests. Teachers who plan activities that are more interest-oriented and that can be completed in a variety of sequences are more able to meet the needs of the students at this stage.

Moving to the next level of development, the conventional level, requires that an individual desire

the approval of others more than he/she desires concrete rewards. The third stage is where one finds the "do gooders". These individuals have a need to do what is right. Students at this level will need activities which have concise, clear directions and will probably prefer having examples of exactly what is expected.

Stage four individuals are concerned with doing what is right for society as a whole. Kohlberg believed a majority of adult Americans operate at stage four. These people follow laws to keep the system running. Social order is the goal.

The postconventional level includes stages five and six. In order to move from conventional to postconventional reasoning, the individual considers what society "ought to be like" rather than blindly accepting what exists. Stage five individuals use abstract reasoning and can understand more than one point of view at a time. They find that legal and moral points of view may conflict and have difficulty integrating them. These students can benefit from open-ended exercises that do not have a "right" or a "wrong" answer.

Stage six is the highest stage. People in this

stage make moral judgments based on principles of justice, equality of all human rights, and respect for the dignity of human beings as individuals. Ghandi and Martin Luther King are seen as Stage 6 individuals.

Kohlberg indicated that people operating at higher stages can understand lower stage reasoning. However, a person cannot understand thinking two stages above his/her own level.

FLORENCE NELSON'S STEPS IN BECOMING SELF-DIRECTED

1. THE FUNDAMENTALS
2. PLEASING THE TEACHER
3. PLEASING THE TEACHER AND SELF
4. PLEASING SELF

FLORENCE NELSON'S

FOUR STEPS IN BECOMING MORE SELF-DIRECTED

Nelson suggests this process through which learners can become more self-directed. As the learner gains direction, the directive role of the teacher decreases. In this process, the best teachers are those who can step aside when the learner is ready to direct himself.

The first step is the fundamentals. The students in this stage need effusive praise. Positive reinforcement, using statements like "Great", "Just wonderful", and "Keep going" work well.

The second step is pleasing the teacher. As the students advance, the teacher must provide positive feedback. Comments like "It is coming along well" or "Now you've got the idea" are useful.

The third step is pleasing the teacher and themselves. "Yes, that's it--how do you feel about it?" and "I see some progress here--what do you think?" are questions that invite the learner to express his feelings about his progress.

The fourth stage is pleasing themselves. This is the time for the teacher to say, "When you need help,

let me know."

As learners become more secure and successful, they will move toward a greater readiness for self-directed learning.

ERIK ERIKSON'S STAGES OF PSYCHOSOCIAL DEVELOPMENT

1. BASIC TRUST VS. MISTRUST
2. AUTONOMY VS. SHAME AND DOUBT
3. INITIATIVE VS. GUILT
4. INDUSTRY VS. INFERIORITY
5. IDENTITY VS. ROLE CONFUSION
6. INTIMACY VS. ISOLATION
7. GENERATIVITY VS. STAGNATION
8. EGO INTEGRITY VS. DESPAIR

ERIK ERIKSON'S

STAGES OF PSYCHOSOCIAL DEVELOPMENT

Erik Erikson has developed the Theory of Identity Development. He proposes eight stages or dilemmas which occur over the course of a lifetime. The stages are built upon one another, and unresolved conflicts make the next stage more difficult to resolve.

Though many of these stages occur in childhood, they are important to adult educators because each stage has an influence on how a person behaves.

Stage I: Basic trust versus mistrust. This stage occurs in infancy, where an individual must develop a loving, trusting relationship with a parent (or caretaker) or risk a continuing feeling of mistrust.

Stage II: Autonomy versus shame and doubt. This stage usually occurs while the child is learning key physical skills (like walking and grasping). If not handled properly, the child may develop a feeling of shame.

Stage III: Initiative versus guilt. During this stage, a child may learn to be more assertive and take initiative. Children who become too forceful may

hurt other people or things and develop feelings of guilt.

Stage IV: Industry versus inferiority. Normally occurring during elementary school, this stage presents the individual with the necessity of learning new skills. If unsuccessful in attaining the new skills, the individual may develop feelings of inferiority.

Stage V: Identity versus role confusion. This stage normally occurs during the teen years when the individual is trying to achieve his/her own sense of identity.

Stage VI: Intimacy versus isolation. During this stage, the individual must develop some intimate relationships or risk suffering feelings of isolation. This stage typically takes place in the early twenties.

Stage VII: Generativity versus stagnation. During the second 25 years of life, the individual must find some way to support the next generation, to turn from him/herself toward others.

Stage VIII: Ego integrity versus despair. This stage, the culmination stage, normally occurs after age 50. If the previous stages have been completed successfully, the individual is able to accept him/herself.

LEVINSON'S LIFE STRUCTURE

AGE	PERIOD OF DEVELOPMENT
17-22	EARLY ADULT TRANSITION
22-28	ENTERING ADULT WORLD
28-33	AGE 30 TRANSITION
33-40	SETTLING DOWN
40-45	MIDLIFE TRANSITION
45-50	ENTERING MIDDLE ADULTHOOD
50-55	AGE 50 TRANSITION
55-60	CULMINATION OF MIDDLE ADULTHOOD
60-65	LATE ADULT TRANSITION
OVER 65	LATE ADULTHOOD

LEVINSON'S LIFE STRUCTURE

Levinson has proposed a life structure which he says is pervasive throughout the population. Progression through the stages, however, does not necessarily include growth or wisdom.

The first developmental period is early adult transition, occurring between the ages of 17 and 22. At this time, a person begins exploring possibilities and making tentative commitments.

Entering the adult world is the next developmental stage. It occurs between the ages of 22 and 28. At this time, a person creates his/her first major life structure. This could be a marriage, a home, or an attempt to pursue a dream.

The third developmental stage is the age 30 transition. This occurs between ages 28 and 33. A person begins to evaluate and revise the first life structure he/she has made.

Between ages 33 and 40 an individual is in the settling down stage. At this time a second life structure is created. This may involve family, work, friends, or community service. The individual seeks to find a niche in society--to "make it".

The fifth developmental stage is midlife transition which takes place between ages 40 and 45. During this period the individual questions what he/she has done with his/her life. Crisis may occur at this stage.

The sixth developmental stage is entering middle adulthood. Between the ages of 45 and 50 the individual forms a new life structure. This may involve a new job or marriage.

The age 50 transition occurs between ages 50 and 55. It is similar to the age 30 transition, requiring evaluation and adjustments of the mid-life structure. If no crisis occurred during entering middle adulthood, one is likely to occur during this stage.

Culmination of middle adulthood is the eighth developmental stage. It takes place between the ages of 55 and 60. At this time an individual may build another midlife structure. This can be a very satisfying time if the adult has had successful adaptations through the structures.

The ninth stage is late adult transition which occurs between 55 and 60. During this period the individual prepares for retirement and old age (both physically and mentally). It is a major turning point

in the life cycle.

The tenth stage is late adulthood. This stage begins at age 65. The individuals in this stage create a new life structure which suits their retirement and health. The individuals must deal with the psychological issue of no longer being young.

LOEVINGER'S STAGES OF EGO DEVELOPMENT

STAGE 1	PRESOCIAL STAGE
STAGE 2	SYMBIOTIC STAGE
STAGE 3	IMPULSIVE STAGE
STAGE 4	SELF-PROTECTIVE STAGE
STAGE 5	CONFORMIST STAGE
STAGE 6	SELF-AWARE LEVEL
STAGE 7	CONSENTIOUS STAGE
STAGE 8	INDIVIDUALIST LEVEL
STAGE 9	AUTONOMOUS STAGE
STAGE 10	INTEGRATED STAGE

LOEVINGER'S STAGES OF EGO DEVELOPMENT

Loevinger proposes a 10-stage hierarchy of ego development. Almost all adults move successfully through the first three stages. Some adults go no further. However, most adults reach at least the self-aware level.

In stages 1 and 2, the presocial and social stages, the individual learns to develop his own identity and a means of communicating.

Stage 3, the impulsive stage, is where the individual asserts his identity through impulsivity. Other people are judged by what they can give. Remaining too long at this stage may bring on such labels as "uncontrollable" or "incorrigible".

The individual learns self-control through reward and punishment in the self-control stage, the fourth stage. While understanding that rules exist, the individual tries to manipulate them to meet his own needs. Some adults function at this level.

Stage 5, the conformist stage, is where the individual identifies with the group and behaves in accordance with group expectations. Individuals in this stage are usually insensitive to individual

differences, stereotypical in response, and see most things as black or white. Things are good or bad, happy or sad. No "gray" exists.

The self-aware level is a transitional stage between the conformist and the conscientious stages. Individuals at this level increase in self-awareness as their understandings of individual differences and shadings of opinions and feelings increase. Their judgments still may be based on stereotypes rather than individual differences.

Stage 7, the conscientious stage, follows. The person at this level has individually created rules and ideals and attempts to live by them. Adults at this stage have rich inner lives with many shadings of feelings.

The individualistic level is a transitional stage between the conscientious and the autonomous stages. The individuals at this level focus heavily on independence and dependence. They are more aware of inner conflict.

In stage 9, the autonomous stage, individuals are completely independent and have the ability to acknowledge and deal with inner conflict. They accept others unconditionally. This stage is rare.

Stage 10, the integrated stage, is the highest stage and is even rarer than the autonomous stage. The inner conflict of the autonomous stage is resolved.

PIAGET'S FOUR STAGES OF DEVELOPMENT

STAGE 1 SENSORI-MOTOR STAGE

STAGE 2 PRE-OPERATIONAL STAGE

STAGE 3 OPERATIONAL STAGE

STAGE 4 FORMAL STAGE

PIAGET'S DEVELOPMENTAL STAGES

Piaget describes four stages of development. Progression through these stages is dependent upon physical maturation as well as experiences.

The sensori-motor stage is the first stage. The individual learns to use signs and symbols to represent objects, situations, and relationships.

The thinking of the individual in the pre-operational stage, the second stage, is ruled by what he observes. Reason is in terms of perception.

An individual in the third stage, the operational stage, has mastered many of the processes involved in solving problems requiring concrete materials. He possesses an understanding of classification, relationships, numbers, and spatial order.

In the fourth stage, the formal stage, abstract reasoning is developed. An individual in this stage is capable of envisioning possibilities, deduction, testing hypotheses, and drawing conclusions.

Piaget has stated that the formal stage is the highest stage. Other experts debate the possibility of the existence of an additional stage, post-formal thought.

Piaget's formal operations stage is considered to be limited in its emphasis on pure logic in problem-solving. Social and interpersonal type problems are neglected. A post-formal stage would deal more with problem-finding (Rybash, Hoyer & Roodin, 1986).

REFERENCES

Aslanian, C.B. & Brickell, H.M. (1980). Americans in transition: Life changes as reasons for adult learning. New York: Future Directions for Learning Society, College Entrance Examination Board. (ERIC Document Reproduction Service No. ED 195 687)

Bee, H.L. (1987). The Journey of Adulthood. New York: Macmillan.

Briggs, H. (1987). Teaching aging: A series of training modules on aging for educators. Florida: University of South Florida.

Darkenwald, G., & Merriam, S. (1982). Adult education: Foundations of Practice. New York: Harper and Row, Inc.

Draves, W. (1984). How to teach adults. Manhattan, Kansas: The Learning Resources Network.

Knowles, M.S. (1985). Andragogy in Action. San Fransisco, California: Jossey-Bass Publishers.

Knox, Alan B. (1977). Adult Development and Learning. San Franscisco, California: Jossey-Bass Publishers.

Long, Huey B. (1983). Adult Learning. New York, New York: Cambridge.

Merriam, S.B. (1984). Adult development: Implications for adult education. Columbus, Ohio: ERIC Clearinghouse on Adult, Career, and Vocational Education.

Newton, E.S. (1980). "Andragogy: Understanding the adult as a learner. In Johnson, L.S. (Ed.), Reading and the adult learner. Delaware: International Reading Association.

Rybash, J.M., Hoyer, W.J., & Roodin, P.A. (1986). Adult Cognition and Aging--Developmental Changes in Processing, Knowing and Thinking. New York: Pergamon Press.

Tough, A. (1977). Major learning efforts: Recent research and future directions. Ontario: Ontario Institute for Studies in Education.

Troll, L.E. (1982). Continuations: Adult development and aging. Belmont, California: Wadsworth, Inc.

Verduin, J., Jr., Miller, H. & Greer, C. (1986). The lifelong learning experience: An introduction. Springfield, IL: Charles C. Thomas.

Whitbourne, S.K. (1986). Adult Development. New York, New York: Praeger Publishers.